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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,724	12/26/2003	Mohan Manoharan	RD-29,346-1	5887

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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

XU, LING X

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/747,724

Applicant(s)

MANOHARAN ET AL.

Examiner

Ling X. Xu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/26/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The material, as recited in claim 1, comprising: “a plurality of structural components” which is “configured in a series of increasing structural component size classes” and the series comprising “a base unit size class and at least one modular size class.” In line 4 of claim 1, it is unclear if the “component of said at least one modular size class” is part of the plurality of structural components recited in line 2 or it is a different component.

In line 5 of claim 1, it recites that the “component of said at least one modular size class” also comprising a plurality of components of the next smaller size class in said series.” It is unclear if the “next smaller size class” is part of the “series of increasing structural component size classes” recited in lines 2-3 of claim 1.

In line 13 of claim 1, it recites that the “said plurality of structural components contained within said modular size class structural component.” The recitation of the “plurality of structural components” being within the modular size class structural component contradicts to the recitation in lines 2-3 of claim 1 that the plurality of structural components configured in a series of structure that includes the modular size class.

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In summary, the structural relations among the terms “a plurality of structural components,” “a series of increasing structural component size classes,” “a base unit size class,” “a modular size class” and “a plurality of components of the next smaller size class in said series” described in claim 1 are very confusing. These terms are not described in the specification sufficiently to enable one skilled in the art to understand, make and/or use the claimed material.

Similar languages are also found in claims 19-20 and 26 and the same rejections are applied to those claims as well.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The material, as recited in claim 1, comprising: “a plurality of structural components” which is “configured in a series of increasing structural component size classes” and the series comprising “a base unit size class and at least one modular size class.” In line 4 of claim 1, it is unclear if the “component of said at least one modular size class” is part of the plurality of structural components recited in line 2 or it is a different component.

In line 5 of claim 1, it recites that the “component of said at least one modular size class” also comprising a plurality of components of the next smaller size class in said series.” It is

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unclear if the “next smaller size class” is part of the “series of increasing structural component size classes” recited in lines 2-3 of claim 1.

In line 13 of claim 1, it recites that the “said plurality of structural components contained within said modular size class structural component.” The recitation of the “plurality of structural components” being within the modular size class structural component contradicts to the recitation in lines 2-3 of claim 1 that the plurality of structural components configured in a series of structure that includes the modular size class.

The structural relations among the terms “a plurality of structural components,” “a series of increasing structural component size classes,” “a base unit size class,” “a modular size class” and “a plurality of components of the next smaller size class in said series” described in claim 1 are very confusing. Similar indefinite languages are also found in claims 19-20 and 26.

It should be noted that claim 1 merely recite the physical characteristics of the layers desired on the claimed material and not setting for the specific compositions which would meet these characteristics render the claims indefinite since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart desired characteristics. The claims are too broad and indefinite since it purports to cover everything, which will perform the desired functions regardless of its composition, and it appears to read upon materials that could not possibly be used to accomplish purposes intended. *Ex Parte Slob* (PO BdApp) 157 USPQ 172. Similar indefinite languages are also found in other claims such as claims 2, 19-20 and 26.

In addition, in claims 1-2, it is unclear the structure difference among the terms such as the “modular size class structural components,” “said plurality of structural components

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contained within said modular size class,” and “the bulk phase.” Similar indefinite languages are also be found in claims 19-21 and 26 and same rejections are applied to those claims as well.

In claim 6, there is insufficient antecedent basis for this limitation of “said interfaces bonding structural components of a first size class” and “interfaces bonding structural components of a second size class” and in the claim. Similar indefinite languages are also found in claims 19-21 and 26.

In claim 10, line 4, it is unclear what the term “compounds of any of the foregoing materials” is referred to since the materials listed are the compounds of the materials. Similar indefinite languages are also be found in claims 24 and 26

In claim 25, it is unclear if the article is a gas turbine assembly or the article is not a gas turbine assembly but comprised of a component which has the same structure as the component used in a gas turbine assembly.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 8-17, 20 and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Eida et al (US 5,869,929).

With respect to claims 1 and 20, Eida discloses a multicolor luminescent device comprising a color conversion material in which a plurality of shielding layers and a plurality of

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different color conversion layers are separately and repeatedly assembled on the substrate (abstract). Figure 2c of Eida shows the device comprising a plurality of structural components, which is configured in a series of increasing structural component size classes. Figure 2c also shows that the structural components having a base unit size class and at least modular size class with at least one bulk phase. These plurality of components are bonded together at interfaces such as the transmittable medium 1 in Figure 2c. Since Eida's device comprises the same structure as claimed, the same structure would also have the same properties and function such as the mechanical function as recited in claims 1 and 20.

With respect to claims 3-6 and 8-10, Eida discloses the device structure comprising the transmittable medium 1 in Figure 2c, which is a chemically bonded interfaces and it comprises at least one interfacial phase which may be any one of a solid phase, a liquid phase and a vapor phase (col. 12, lines 35-50). The material for the transmittable medium can be an inorganic oxide layer such as alumina, silica or a glass plate (col. 12, lines 35-50). The interfaces material is considered unique (which is not randomly selected) to the shielding layers and the color conversion layers.

It is noted that claim 11 is a product-by-process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps (MPEP 2113). "[E]ven though product – by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966. Eida

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discloses same material such as glass and other inorganic oxide as claimed even though Eida does not disclose that the material was made by sintering.

With respect to claims 12-14 and 24, Eida discloses that the examples of material used for the shielding layer (the "bulk phase") may be metal or ceramic such as oxides, nitrides, nitrates and sulfates of Si, Al, and Mo (col. 10, lines 40-60).

With respect to claims 15-16, Eida discloses the structural components in the device having substantially similar shapes of rectangular (See Figures 1b-1c).

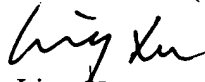
With respect to claim 17, the predetermined porosity level of the interfaces in Eida is considered to be close to zero since Eida's interfaces do not have pores.

With respect to claim 25, Eida discloses the device comprising glass or polymer material (col. 12, lines 35-50). The glass or polymer material can also be used in gas turbine assembly.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ling X. Xu
Examiner
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